A MARKET SURVEY
OF THE
UK BUREAUX OPPORTUNITIES

INPUT

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OFFICES

UNITED STATES

2180 Sand Hill Road
Menlo Park, CA 94025
(415) 854-3422

Park 80
Plaza West-1
Saddle Brook, NJ 07662
(201) 368-9471

EUROPE

INPUT
500 Chesham House
150 Regent Street
London W1R 5FA
England
London 439-6288
Telex 261426

PGP Sistema SRL
20127 Milano
Via Soperga 36
Italy
Milan 284-2850

JAPAN

Overseas Data Service Company, Ltd.
Shugetsu Building, No. 12-7 Kita-Aoyama
3-Chome Minato-Ku
Tokyo, 107
Japan
(03) 400-7090

AUSTRALIA

Infocom Australia
Highland Centre, 7-9 Merriwa Street
P.O. Box 110, Gordon N.S.W. 2072
(02) 498-8199

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OF THE
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PHASE ONE

Prepared for CRC Information Systems Ltd

11th July, 1978

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INTRODUCTION

SECTION I

INTRODUCTION

- The "UK Bureau Opportunities" Market Survey originated in discussion between CRC and INPUT, the details of which were subsequently agreed in INPUT's letter dated 26th May, 1978.

- The survey consists of two phases :
  - Phase 1 : Analysis of market trends and opportunities
  - Phase 2 : Elaboration of specific opportunities and required market approach.

- This report contains the results of Phase 1, the objective of which is to provide market size and growth data by industry, application and type of service. After evaluation of this Phase 1 data, specific areas of interest to CRC can be identified and Phase 2 commenced.

- The data used in this report originates from a survey of the Times 1000 and the top 500 financial companies conducted by INPUT earlier this year. All companies in the survey were contacted by 'phone to establish the identity and co-operation of the most appropriate respondent ; the survey form was then dispatched and the returned forms were vetted on receipt. This procedure ensured achievement of good data quality and a statistically significant sample ; in fact a 46% sample was obtained of a total of 1522 companies.

- In any survey of this kind, a boundary has to be drawn around the essential questions to be answered and the volume so delineated must represent reasonable effort by the respondent. We have been careful in this report to remain within the data boundary and to point out, where appropriate, the instances in which sub-divisions of the data are statistically unrepresentative.

- In this context, it is essential to read the present report bearing the following in mind :
  - respondents to the Times survey were mainly data

processing managers who, by their nature, are not anxious to encourage the use of external services which they cannot always control,

- non users could not estimate the growth of their (non-existent) usage. This means that a large portion of the true growth cannot be estimated accurately,

- current users who could give no estimate of their growth were treated as 0% growth.

- As a result of the foregoing it is important to treat the market growth tables of data as relative values, rather than absolute values.

- In the same way, the assumptions and conclusions drawn in this report relate to the Top 1500 companies in the UK, not to the entire UK market for which the conclusions may not apply.

- This therefore assumes that CRC will be adopting a large account strategy in the UK, in applying the data presented in this report to their marketing targets. Should this not be the case, care should be taken not to overgeneralise the report's conclusions.

- Nationalised Industries, local and national government bodies, ministries and services, public administration and defense activities were all excluded from the study. This is a very big market in its own right (as COMSHARE is finding out) and one which should be examined by CRC as a prime target for on-line services.

SUMMARY

SUMMARY

- This section synthesizes the findings of the study in each of its four main sections (i) Industry sector (by size of market) (ii) growth of same (iii) degree of competition found in each of the foregoing (iv) applications growth and penetration.
- The market opportunities, so defined, have been rated for the Interactive Services market purely on the basis of large market, with good growth,with low competition and high applications growth.
- It cannot be too strongly stressed, however, that (1) there are many applications that will be glossed over in this manner, which lie dormant until a vendor decides to make the investment necessary to begin its expansion - markets are a function of vendor presence to a large extent ; (2) the order code markets selected in this way cover a large spectrum of applications (rather too braod to be a suite of programs) ; within each area there are key applications and minor ones.
- Based upon the selection criteria defined above, the Food/Drink/ Tobacco sector is an excellent market opportunity. So it has proved for a number of timesharing suppliers for activities such as sales forecasting, financial analysis/modelling, production/inventory and general accounting.
- Metal manufacture is also of high interest, mostly for production/ inventory problems, as would be expected, but equally for financial analysis/planning. In the latter application, the current penetration is higher (and the growth lower) than in Food and Drink for the same application.
- Three other areas offer strong potential ; Chemical and Allied INdustries, Electrical Engineering (very broad sector) and Paper, Printing and Publishing. Least attractive of all is the Insurance, Financial, Banking and Business Services which are highly penetrated and where strong competition is found. It is also an area where in-house banking systems are increasingly absorbing new applications. Yet, paradoxically, there is still a lot of very good business to be done (cf. HIS, COMSHARE, CENTREFILE).

SUMMARY OF INTERACTIVE

MARKET OPPORTUNITIES

ORDER CODE	SAMPLE SIZE (£000)	DECLARED GROWTH (%)	COMP- (*)	APPL (*)	MARKET OPPORTUNITY
Food/Drinks etc	605.4	+33	1	H	V.Good
Chemical/Allied	610.2	+ 5	1	M	Good
Metal Mfr	291.7	+48	2	H	V.Good
Electrical Eng'g	331.1	+ 6	1	H	Good
Vehicles	250.8	+ 2	3	H	Ave
Paper/Print etc	533.5	+10	3	H	Good
Distributive Trades	327.1	- 2	3	L	Ave
Ins/Finance etc	396.7	-13	2	M	Ave

* Legend

(a) Competition

1 = one vendor strongly established (>15%)

2 = two " " " "

3 = many " " " "

(b) Applications

H = high growth

M = medium growth

L = low growth

Exhibit 0

INDUSTRY CATEGORY ANALYSIS

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INDUSTRY CATEGORY ANALYSIS

Methodology

- Current annual expenditure is given in this analysis by industy category. For the purpose of this analysis a SIC code was assigned to each company according to their major business activity. The expenditures and market size shown are calculated by inflating the cumulative sample expenditures by the ratio of number of companies in the industry category to the sample number.

- In industry categories where the sample proportion is insignificant, the market size and expenditure figures could be misleading ; attention is drawn to these cases by an asterisk against the industry category.

- With regard to Growth data, (growth or decline), when this was not stated by the respondent, his value was taken as zero growth ; also where a replacement of the services was indicated (by in-house service for example) a decline of 100% was used.

- The growth percentages given were typically provided by data processing directors and managers ; they refer to today's intention and not the plans for tomorrow, which may well be influenced by executives outside the data processing department. Furthermore, the survey did not examine the intention of non-users of external services.

Summary

- The best market for Computer Services in the "Top 1500" is that of Interactive Services, for the following reasons :
  - the market size is approaching double that of Remote Batch,

TOP 1500 MARKET SIZE AND EXPENDITURE

SIC ORDER CODE	MARKET SIZE (£K)	EXPENDITURE (£K)		
		BATCH	REMOTE BATCH	INTER-ACTIVE
Mining and Quarrying *	264.4	-	174.4	88.0
Food Drink & Tobacco	1,257.6	541.2	111.0	605.4
Coal & Petroleum Products *	233.3	45.8	145.8	41.7
Chemicals & Allied Ind.	3.3	143.9	79.2	610.2
Metal Manufacture	428.6	16.7	120.2	291.7
Mechanical Engineering	1,190.9	757.0	268.7	165.2
Instrument Engineering	275.9	72.0	42.7	161.2
Electrical Engineering	840.9	351.5	158.3	331.1
Ship building & Marine Eng.	60.6	-	-	60.6
Vehicles	617.2	270.3	96.1	250.8
Other Metal Goods	221.7	113.3	41.7	66.7
Textiles	402.0	226.0	28.9	147.1
Clothing and Footwear	173.8	119.0	-	54.8
Bricks, Glass, Cement etc *	622.8	227.3	227.3	168.2
Timber, Furniture etc.	177.7	119.7	58.0	-
Paper, Printing & Publishing*	700.0	-	166.5	533.5
Other Manufacturing Industries *	250.0	90.6	-	159.4
Construction	673.3	430.8	161.0	81.5
Transport & Communication	588.2	344.6	49.0	194.6
Distributive Trades	2,170.5	1,232.4	611.0	327.1
Insurance, Financial etc.	1,000.0	340.8	262.5	396.7
Prof. & Scientific Services	85.0	25.5	59.5	-
Miscellaneous	828.8	491.0	68.3	269.5
"TOP 1500" MARKET	13,894.5	5,959.4	2,930.1	5,005.0
TOTAL MARKET	174,725.3	104,395.6	41,208.8	29,120.9
"TOP 1500" PROPORTION	8.0%	5.7%	7.1%	17.2%

Note : * - denotes an area where the data is not statistically significant ; values may therefore be in doubt.

Exhibit I

- the market size is almost the equivalent of Batch Services and has good positive growth (as opposed to a decline in Batch),
- the "Top 1500" are responsible for a much higher (factor of 3) expenditure compared with the overall market for Interactive services.

- There are no common areas of strong growth in the industry markets for each type of service (i.e. no single industry sub-sector is a strong market for all service categories). Conversely, it may be said that particular industries have a preference for one or in some cases two types of service, for example :
  - Chemical and Allied is the largest spender on Interactive ; their industry is also amongst the lowest spenders on Batch and Remote Batch.
  - Mechanical Engineering and Distributive Trades are the largest spenders on Batch and Remote Batch services ; they are also relatively low spenders on Interactive services.
  - Food, Drink and Tobacco is a big spender on Batch Services and Interactive, but only middle ranking on Remote Batch.

- A comparison of the stated "Top 1500" current usage growth and the overall UK market growth gives rise to some important considerations :

MARKET / SERVICE	Batch	Remote Batch	Interactive
Top 1500 users	- 1.8%	7.7%	7.0%
Total UK market	6.0%	10.0%	29.0%

(1) It is likely that the contraction of the UK Batch Services market will take place first in the largest companies. The survey confirms this ; however it is unlikely that the Batch

COMPUTER SERVICES GROWTH

BY INDUSTRY SECTOR (TOP 1500)

INDUSTRY	OVERALL GROWTH (%)	GROWTH (%)		
		BATCH	REMOTE BATCH	INTER-ACTIVE
Mining & Quarrying *	17	-	0	50
Food, Drink & Tobacco	14	-5	5	33
Coal & Petrol Products*	12	15	15	-
Chemicals & Allied Ind.	8	11	25	5
Metal Manufacture	40	14	24	48
Mechanical Engineering	-1	-1	-19	29
Instrument Engineering	5	9	20	0
Electrical Engineering	15	21	19	6
Shipbuilding & Marine Eng.	3	-	-	3
Vehicles	-14	-15	-53	2
Other Metal Goods	-27	-5	10	-11
Textiles	18	5	100	23
Clothing & Footwear	-	0	-	-1
Bricks,Glass,Cement etc.*	2	0	5	0
Timber,Furniture etc.	4	0	14	-
Paper,Printing & Publishing*	13	-	22	10
Other Manufacturing Ind.*	-28	100	-	-100
Construction	1	13	-38	15
Transport & Communication	-17	-26	25	-13
Distributive Trades	-2	-16	25	-2
Insurance,Financial etc.	-1	11	0	-13
Prof. & Scientific Services	7	0	10	-
Miscellaneous	8	5	-	16
OVERALL GROWTH	+1.1%	-1.8%	7.7%	7.0%

Note : * - denotes an area where the data is not statistically significant ; values may therefore be in doubt.

Exhibit 2

Services market has already begun to decline in value. The data received from respondents must surely understate the true market growth.

(2) The Remote Batch market has not been actively promoted by the main Remote Computing Vendors, who serve the Top 1500 companies. But (a) the Top 1500 data must once again understate the true growth rate and (b) the actual growth for the UK Remote Batch market is likely to increase steadily in the near future with the arrival of on-site hardware offerings from the RCS vendors.

(3) The INteractive Services usage is a highly volatile issue with many of the very large companies, who, when they see the external expenditures rising, like to attempt to bring more of the processing in-house. This is a fluctuating market where large swings can occur on single accounts. However, the true growth is by far in excess of the mathematical calculation of the respondents stated intentions.

- The main points to remember when analysing Exhibit 1 are as follows :
  - (a) market values are those stated by the respondents ; this obviously does not include expenditures they were not aware of, which in some instances can be considerable,
  - (b) some SIC order code markets are not adequately represented by the sample. Where less than 14% of the entire population responded, an asterisk indicates low statistical validity.
  - (c) a full list of the SIC order codes is given in Appendix I.

TRENDS IN APPLICATION USAGE

TRENDS IN APPLICATION USAGE

Methodology

- The application categories are broad (see Appendix I) but unmistakable to respondents ; they do, however, cover a large selection of specific applications and no attempt has been made (in Phase 1) to refine this classification.

- Respondents were asked, in each case :
  1) which application categories are currently being processed by a computer system (internal or external)
  2) which application systems will be used more, or less, in the future.

- Exhibit 3 gives, for each major application area, the usage and growth/decline percentages in the following format :

Percentage of sample using/% of sample using more (+) /% of sample using less (-)

Summary

- Interpretation of Exhibit 3 can be based primarily on two approaches, namely :
  1) Ranking in descending order of percentage of current usage combined with growth percentage ; this approach assumes that the "need" is already sold and growth will be achieved with more/better services and products.
  2) Ranking in descending order of growth percentage (as the primary classification) and ascending order of percentage usage ; this implies a relatively greater effort in selling the need but a relatively open-minded market in which to trade .

TRENDS IN APPLICATION USAGE BY INDUSTRY

INDUSTRY	APPLICATION					
	Engineering/ Scientific	Production/ Inventory	Marketing/ Sales	Personnel	Gen.Accty./ Payroll	Fin.Analysis/ Planning
Mining and Quarrying *	100/100+	/100+	100/100+		100/100+	100/100+
Food, Drink & Tobacco	25/21+	75/67+	83/75+	58/54+	96/63+	54/79+
Coal & Petroleum Products *	50/50+			50/50+	100/50+	50/50+
Chemicals & Allied Ind.	36/4-32+	68/60+	76/60+	32/40+	84/68+	52/76+
Metal Manufacture	57/14-29+	71/71	43/43	43/14-29+	100/43+	71/43+
Mechanical Engineering	41/44+	81/78+	47/59+	34/41+	88/69+	50/66+
Instrument Engineering	40/60+	60/100+	100/20+	60/20+	100/40+	80/60+
Electrical Engineering	67/83+	58/92+	50/83+	33/50+	92/50+	25/67+
Shipbuilding & Marine Engineering	100/100+	100/100+	33/33+	66/100+	33/33+	33/33+
Vehicles	70/80+	100/90+	70/80+	60/70+	100/80+	90/90+
Other Metal Goods	33/33+	83/67+	50/33+	50/50+	100/50+	33/50+
Textiles	33/33+	56/67+	56/56+	11/56+	67/56+	33/67+
Clothing & Footwear	33/33+	/33+	33/66+	33/66+	33/33+	33/66+
Bricks, Glass, Cement etc *	/25+	100/75+	100/75+	/75+	100/50+	75/75+
Timber, Furniture, etc.		50/50+	75/75+	/25+	100/100+	/25+
Paper, Printing & Publishing *	33/33+	66/66+	100/83+	17/50+	100/83+	83/66+
Other Manufacturing Industries *		67/100+	100/100+	33/100+	100/67+	67/67+
Construction	35/29+	47/53+	12/29+	12/29+	71/71+	35/71+
Transport & Communication	43/43+	71/86+	86/100+	86/86+	100/86+	100/86+
Distributive Trades	16/11+	49/54+	62/57+	24/43+	86/62+	51/3-68+
Insurance Financial etc.	*	See	next	page	*	
Prof. & Scientific Services *		100/100+	100/100+		/100+	100/100+
Miscellaneous	20/20+	53/53+	40/60+	33/67+	87/53+	33/73+

Exhibit 3

- Assuming the descending order sequence of usage and growth and counting industries above 70/70 (ignoring asterix industries) the industries with best potential are :

    1. Vehicles
    2. Transport and Communications
    3. Shipbuilding and Marine Engineering
    4. Timber, Furniture etc.

- Taking the same approach with application areas those with the best potential are :

    1. Production/Inventory
    2. Marketing/Sales
    3. Financial/Analysis/Planning

- If industry/application combinations are selected which are above 70% for growth and below 70% for usage, the effect is to reinforce the potential in Vehicles and raise the relative importance of :

    1. Electrical Engineering
    2. Food, Drink and Tobacco
    3. Construction

- Taking the same approach with application areas, Financial Analysis/Planning becomes a much bigger potential market area.

- Due to the difference within the three industry groups of applications most commonly used, Exhibit 4 cannot exactly match all applications in all three groups. However, several notable trends are apparent.

- Marketing/Sales analysis and personnel related applications will receive in future less attention than at present. The most obvious explanation of this trend is that corporate headquarters of large companies were interviewed, where such mundane tasks are increasingly decentralised/delegated to the establishments within the enterprise. Hence the drop in central processing.

TRENDS IN APPLICATION USAGE BY INDUSTRY GROUP

	INSURANCE, BANKING, FINANCE, + BUSINESS SERVICES		
APPLICATION	Industrial	Financial	Accountants/ Consultants
Engineering/Scientific	/17+	N/A	
Production/Inventory	/17+	N/A	
Marketing/Sales	/17-	N/A	
Personnel	43/17- 43+	N/A	
Gen.Accounting/Payroll	57/71+	75/51+	67/22+
Fin. and /Planning	57/4- 57+	48/5- 56+	67/67+
Portfoilio Management	N/A	41/3- 38+	/11+
International Fin. dealing	N/A	22/3- 22+	
Internal Accounting	N/A		44/56+
External Accounting	N/A		11/22+
Audit	N/A		44/44+
Taxation	N/A		/22+
Receivership	N/A		/11+
Consultancy	N/A		67/56+

Exhibit 4

- In people/service-related groups (Financial/Banking, Accountants/ Consultants) as much as the equipment/product-related group (Industrial), the continued and growing need for general accounting and payroll is strongly in evidence with a relatively weaker growth in the obvious place : accountants.

- Significantly, in the Accounting/Consultancy groups internal accounting dominates the requirements in EDP terms over external accounting, (where the client"s opinion intervenes and enters a realm the accountants have not really broached yet : EDP processing of clients accounts). This suggests that business potential exists in dealing jointly with accountants for certain types of accounts.

- Financial analysis and Planning, for more reasons than one, shows a healthy penetration and growth rate. This cannot be divorced from the fact that so many equipment and services vendors, particularly the Interactive Timesharing suppliers have keyed-in on this requirement and widely support it.

- Exhibit 4 serves merely to indicate the global application trends in each of the three main groups. It should not be treated as an infallible guide for application development, since each area mentionned is composed of a number of applications of differing levels of interest.

ANALYSIS OF THE COMPETITION

ANALYSIS OF THE COMPETITION

Methodology

- The market share of the Top 1500 expenditure is given for all major competitors by type of service and by industry category. In the survey which contributed to our database, respondents gave specific information about their current annual expenditure with each supplier, and by type of service.

- The market share given is the client percentage of respondent's expenditure with each supplier, as a proportion of total reported expenditure in the "Top 1500" sample obtained. For purposes of mathematical precision, percentages are rounded to one decimal point ; however the data is significant only to +/- 5%.

Summary

- For the first time in any survey known to INPUT, the market share of the main suppliers active in the UK appears broken down by SIC order code. This immediately clarifies the competitive situation when for too long the market shares have been calculated on the total revenue, from all sources, of each supplier. No supplier (including HIS and IBM) services the entire UK market.

- In the same way the real competitive clashes begin to appear. While it is not true to say that the Top 1500 sample is representative of the entire market, it does illuminate some interesting market conflicts.

- Food, Drink and Tobacco, Mechanical Engineering, the Distributive Trades and Insurance/Financial are highly contested Batch markets with individual market shares rarely rising above 10%.

- BOC, Baric and Computel are the most effective suppliers of Batch Services across the spectrum of the UK industry sectors.

COMPETITOR MARKET SHARES BY INDUSTRY - BATCH

INDUSTRY	COMPETITOR %'ge																			
	Dataskil	SIA	Syst Share	Centre File	BOC	Baric	CMG	ADP/MP	GEEST	Compute 1	Compower	IBM	CDC	Astral	Lowndes Ajax	NCR	Scicon	UCSL	ACT	Hoskyns	Other
mining & quarrying																					100.0
food, drink & tobacco					30.4	6.4	11.7	0.2	1.7	5.5			2.0	4.5	5.3	4.7	1.6				21.0
coal & petroleum products										45.5											54.5
chemicals & allied ind.				8.1		6.5		3.1		6.4	2.8				13.5			4.0	4.8		50.8
metal manufacture							14.3														85.7
mechanical engineering	1.2	5.0	7.0	1.1	3.7	7.8	0.4		10.0	7.4		10.7									45.6
instrument engineering																	40.7				59.3
electrical engineering						17.7		10.9				0.5	8.0			3.9					59.0
shipbuilding & marine eng.																					100.0
vehicles					2.9	2.9		5.78		2.9	7.8	6.7	2.9							21.4	46.8
other metal goods						9.8				3.7		31.3	0.9								54.4
textiles					36.2	3.0					14.5	14.5									31.9
clothing & footwear													*								
bricks, glass, cement etc.																					100.0
timber furniture etc.				21.5		3.2		21.5													53.8
paper, printing & publish.																					100.0
other manufacturing ind.																					100.0
construction				7.7		37.2	3.8			19.3	1.9				0.4						29.7
transport & communication					40.5	9.7														32.0	17.8
distributive trades				8.6	12.4	7.1	0.3		0.5	8.2		7.8	1.1			3.1	4.5				46.5
insurance, financial etc.				12.3	5.3	1.4	1.8	0.1				8.1	1.6		7.3						62.3
prof. & scientific services																					100.0
miscellaneous					15.4	14.7	3.3	0.5	7.8	0.5					2.4					0.5	55.0

* - small sample, indication of significant market share

Exhibit 5

- Centrefile, UCC, IBM and Compower have begun to attract significant Remote Batch Market shares in several industries, but no single vendor dominates the UK Remote Batch market.

- The Interactive market is a highly contested one with across-the-board strength in most sectors from HIS, ADP, COMSHARE, IBM and Atkins On-line. The market shares are very unequal in nine out of twenty three sectors.

- Obviously this data needs to be elaborated in more depth, but it provides the basis for selecting market targets and offers a useful insight into the competitive environment that is found within the top 1500 UK companies - still the best source of growth for Interactive Services.

- One key element to emerge from the study was the high level of non-users in this category of very big companies. As one time-sharing company vice-president puts it : "There are an awful lot of elephants left in the park".

BATCH SERVICES MARKET SHARES

- The UK Batch Services market is very broadly distributed among the suppliers, which precludes a clear market leader developing, other than by acquisition (similar to that which has occurred in the U.S.)

- Baric, while not achieving anything like a market lead in terms of total turnover, has achieved the best mix in industry sector coverage, which augurs well for their growth in the future. They also have the largest market share in the construction industry, easily distancing Computel.

- Second in terms of number of markets served is Computel, although the vast majority of its revenues come from one sector : coal and petroleum products.

COMPETITOR MARKET SHARES BY INDUSTRY - REMOTE BATCH

INDUSTRY	COMPETITOR %'ge																	
	Centre File	UCC	SIA	UCSL	IBM	Compower	Scicon	CDC	Lowndes Ajax	BOC	CCS	Computel	HIS	GEC	Baric	NCR	Cybernetics	Other
mining & quarrying		50.0								50.0								
food, drink & tobacco	10.8		36.0			15.3	37.8											
coal & petroleum products		21.3	28.6	42.9				1.4										5.7
chemicals & allied ind.					22.5				30.1									47.4
metal manufacture						94.1					5.9							
mechanical engineering	3.4	18.8	12.0		37.8		12.0					1.6	4.8					9.6
instrument engineering																		100.0
electrical engineering												2.4		76.1	21.5			
shipbuilding & marine eng.																		100.0
vehicles					*													
other metal goods					90.0	10.0												
textiles											*							
clothing & footwear																		
bricks, glass, cement etc.									*									
timber furniture etc.	8.8																	91.2
paper, printing & publish.					44.0			56.0										
other manufacturing ind.																		
construction	1.0	1.0	2.6	2.7		25.9						25.9						40.9
transport & communication			*															
distributive trades	8.4	16.7		13.6	2.8				17.9	16.7						17.7	6.2	0.0
insurance, financial etc.	43.2	4.4			8.9			6.1	11.4			0.1	1.4					24.65
prof. & scientific services																		*
miscellaneous	31.3																	68.7

* - small sample, indication of significant market share

Exhibit 6

- BOC, while not active in all markets has the strongest market share in five of the eight markets it participates in. It will be remembered that BOC has been pursuing a policy of acquisition in the UK for quite some time now.

- IBM is not strongly represented in the UK Batch market and is weak in most sectors, following their well advertised pull-out of regional offices. Nevertheless the metal goods and mechanical engineering provide good revenue to IBM.

- The second tier of suppliers (CMG, Centrefile, ADP/MD, Compower, Lowndes - Ajax etc) have single-sector strength in the main and generally less than 10% in the other sectors.

REMOTE BATCH SERVICES MARKET SHARES

- This market is a curious mixture of strong market sectors and lack of development in others. There has not been a concerted effort on behalf of the services suppliers to actively encourage the UK market's development as yet, although there are plans afoot for ADP and CSS International to introduce their on-site hardware systems tied to their respective networks.

- IBM has a strong presence in the RB market, and in some instances a dominant position. IBM has pursued this market to some extent, but without achieving a broad penetration of the market.

- Centrefile, surprisingly, is well introduced in some unexpected sectors. The legal services do not appear (normally under professional & scientific services) since more of the practices served are in the Top 1500. The Insurance/Financial sector is their largest, of course.

- UCC has established a significant presence in the RB market particularly in the petroleum, engineering and distributive trades.

COMPETITOR MARKET SHARES BY INDUSTRY - INTERACTIVE

INDUSTRY	COMPETITOR %'ge																			
	HIS	ADP	Comshare	IBM	CRC	Atkins On-line	CDC	UCS	I P Sharp	BOC	Tymshare	Scicon	CSS	Computer	SIA	Baric	GEC	Syst. Share	CCS	Hoskyns	Other
mining & quarrying								*													
food, drink & tobacco	8.9	12.7	14.2	36.6	8.3	5.1			6.6	1.7	3.7										2.3
coal & petroleum products		*																			
chemicals & allied ind.	13.6	13.7	34.6	8.7		5.1			7.8			3.9	0.2								12.4
metal manufacture	9.2	38.8	46.5				1.0						2.5								2.0
mechanical engineering	21.7	5.1	17.5	5.5	2.5	4.9	2.6					3.5			18.3	2.6					13.8
instrument engineering	63.8	17.8	17.8	0.5																	
electrical engineering	55.7	1.5	2.0		1.4	1.9															
shipbuilding & marine eng.			14.2															85.9			
vehicles	25.5		3.8	18.9		15.6			36.2												
other metal goods			2.2	42.4		40.4										15.0					
textiles	66.3			1.3															25.8		6.5
clothing & footwear	73.9			26.1												10.0					
bricks, glass, cement etc.																					
timber furniture etc.																					
paper, printing & publish.	1.6	5.6	49.0	5.6		20.8							17.3								
other manufacturing ind.				*																	
construction	87.8					12.2															
transport & communication				55.9		12.6														18.9	12.6
distributive trades	5.6		15.1	29.9	13.4		4.2							17.4							14.6
insurance, financial etc.	49.0	1.6	2.5	24.8		1.5	2.6														17.9
prof. & scientific services																					
miscellaneous	5.0	28.0	22.0		1.8	4.0															39.2

* small sample, indication of significant market shares

Exhibit 7

INTERACTIVE SERVICES MARKET SHARES

- Although small, the Interactive Services market is a very rapidly expanding one. Also, despite the dominant shares of five companies, Timesharing companies do not meet "tooth and nail" competition in the field.

- The big five are HIS (the largest), Comshare (the fastest gaining), IBM (the third largest), ADP (Cyphernetics and TSL operations) and Atkins On-line. All other companies have a low penetration of the Top 1500.

- The number of suppliers of Interactive Services to the UK Market is increasing slowly. In addition to the twenty suppliers listed in Exhibit 7, many others compete in a significant way (see the size of "other").

- Notable by its absence in at a major level of participation is CDC, while CSS International, is only just beginning to expand its operations.

APPENDICES

APPENDIX 1 - INDUSTRY CLASSIFICATION

The industry classification used in this report is the 'Standard Industrial Classification' as issued by the Central Statistical Office. The following pages are taken from the official reference booklet.

The tables in this report use the major industrial headings referred to in SIC as 'Orders'.

SUMMARY OF ORDERS AND MINIMUM LIST HEADINGS

ORDER X—SHIPBUILDING AND MARINE ENGINEERING

ORDER XI—VEHICLES

ORDER XII—METAL GOODS NOT ELSEWHERE SPECIFIED

ORDER XIII—TEXTILES

APPENDIX 2 - APPLICATION CLASSIFICATION

Typical applications contained by the major headings used in this report are:

Engineering/Scientific	- Chemical/petrochemical engineering, civil/structural engineering, mechanical engineering, electrical/electronic engineering, operations research etc.
Production/Inventory	- Production control and scheduling, quality control, inventory control, industrial engineering, numerical control, management reports etc.
Marketing/Sales	- Sales forecasting, market research and survey analysis, transport and distribution systems, market and sales planning, managements reports etc.
Personnel	- Manpower management statistics, personnel database, other personnel applications.
General Accounting/ Payroll	- Payroll, transaction and customer accounts, costing etc.
Financial Analysis and Planning	- Cash flow forecasting, budget and long range planning forecasting, analysis and consolidation, capital investment analysis etc.
Portfolio Management	- Asset accounting, loan portfolios, portfolio management etc.